

## CLAIMS

1. A receiving apparatus, comprising:
  - a receiver which receives a signal;
  - an equalization processing unit which performs equalization processing on the signal received by said receiver;
  - a selector which selects either the signal received by said receiver or the signal on which the equalization processing has been performed by said equalization processing unit;
  - a first demodulation unit which demodulates the selected signal according to a first modulation scheme when a modulation scheme of the selected signal is the first modulation scheme; and
  - a second demodulation unit which demodulates the selected signal according to a second modulation scheme when a modulation scheme of the selected signal is the second modulation scheme whose transmission rate is higher than that of the first modulation scheme,  
wherein if the modulation scheme of the received signal is the first modulation scheme, said selector selects the signal received by said receiver.
2. A receiving apparatus according to Claim 1, wherein when said selector selects the signal received by said receiver,

said equalization processing unit stops the equalization processing.

3. A receiving apparatus according to Claim 1, wherein a signal to be received by said receiver is a burst signal and the modulation scheme for a header portion of the burst signal is the first modulation scheme, and

wherein said equalization processing unit performs equalization processing on at least part of the header portion of the burst signal, and stops performing the equalization processing on the remaining portion of the burst signal when said selector has selected the signal received by said receiver.

4. A receiving apparatus according to Claim 1, further comprising a measurement unit which measures the quality of the signal received by said receiver when the modulation scheme of the signal received by said receiver is the first modulation signal,

wherein when the measured quality of the signal is worse than a predetermined threshold value, said selector selects the signal on which the equalization processing has been performed by said equalization processing unit although the modulation scheme of the received signal is the first modulation scheme.

5. A receiving apparatus according to Claim 1, wherein said equalization processing unit includes a plurality of storages which are arranged in series, and wherein when the signal received by said receiver is selected, said selector outputs a value stored in any of the plurality of storages included in said equalization processing unit.

6. A receiving apparatus according to Claim 1, wherein said second demodulation unit further includes a residual component processing unit which further performs equalization processing on the selected signal.

7. A receiving method, comprising:

receiving a signal;  
performing equalization processing on the signal received by said receiving;  
selecting either the signal received by said receiving or a signal that has undergone said equalization processing;  
demodulating the selected signal according to a first modulation scheme when a modulation scheme of the selected signal is the first modulation scheme; and  
demodulating the selected signal according to a second modulation scheme when a modulation scheme of the selected signal is the second modulation scheme whose transmission rate is higher than that of the first modulation scheme,

wherein when the modulation scheme of the received signal is the first modulation scheme, the signal received by said receiving is selected by said selecting.